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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/701,146

11/04/2003

Frank C. Smith JR.

50121

4832

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04/14/2010

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ART UNIT

PAPER NUMBER

3644

MAIL DATE

DELIVERY MODE

04/14/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/701,146  
Filing Date: November 04, 2003  
Appellant(s): SMITH, FRANK C.

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Ms. Shaper  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 12/4/09 appealing from the Office action mailed 7/13/2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

The BPAI Decision (Examiner Affirmed in Part) rendered 12/12/07 is related to this current appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

4641800	Rutan	2-1987
1987050	Burnelli	1-1935

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Admitted prior art that successful testing of a canard aircraft with a single tractor engine that was witnessed.

Rutan ATTT <http://www.scaled.com/projects/ATTT.html>

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 11 are misleading in that applicant claims that there is "a two-surface canard having two and only two significant horizontal lifting surfaces, with a smaller lifting surface in front of a larger lifting surface." . A canard is defined as "one of two small lifting wings located in front of the main wings". The two-surface canard does NOT have two and only two significant horizontal lifting surfaces, with a smaller lifting surface in front of a larger lifting surface. The larger lifting surface is the wing 14 and the two-surface canard is numbered 12.

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Claims 1, 3-6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutan 4641800 in view of Rutan ATTT.

Rutan discloses that canards with pitch control surfaces on an aircraft with no empennages and two significant horizontal surfaces are well known in the art. Rutan lacks the door at the rear of the fuselage. Rutan ATTT does teach using a door at the rear of the fuselage.

It would have been obvious to one skilled in the art at the time the invention was made to have used doors at the end of the fuselage in Rutan's system as taught by Rutan ATTT to easily load cargos.

RE amended claims 1 and 11, the motorcycle, patient on a gurney and a man in a wheelchair is merely intended use and carries no patentable weight. Plus, a "motorcycle, patient on a gurney and a man in a wheelchair" comes in many sizes. In addition, a weight limit of 5000 pounds and a hp limit of up to 500 hp is a design choice that one skilled would have chosen to have optimized the desired mission of the aircraft. A change in the size of the aircraft that results in the weight limit of 5000 and a change in the engine volume with a hp limit of 500 is within the level of ordinary skill in the art. See in re Rose, 105 USPQ 237 (CCPA 1955).

RE claim 6, the applicant has not provided any criticality of 5 feet high by 4 feet high and thus is merely a design choice. In fact, applicant has stated on page 3 line 29 of the specification that "10' x 5' x 4'" is not necessary to the design. Applicant seems to admit that the dimension is a design choice.

In addition, where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396. Accordingly, since the applicant[s] have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement. The rear door of Rutan's aircraft as modified by Rutan ATTT does indeed allow "large" objects to be loaded through the "large opening", which in this case can be at least 4 feet by 3 feet.

Re claim 8, please note that the two engines 18 of Rutan are on the larger lifting surface.

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Claims 2 and 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutan 4641800 in view of Rutan ATTT as applied to claim 1 above, and further in view of Burnelli 1987050.

The examiner believes that Rutan has yaw control surfaces the larger lifting surface but in order to definitively show that yaw control surfaces on a larger lifting surface, the examiner brings forth Burnelli 1987050 to show that such claimed elements (number 14) are well known. Therefore, claims 2 and 12 are rejected by Rutan in view of Rutan ATTT and further in view of Burnelli. It would have been obvious to one skilled in the art to have used the yaw control surfaces for increased maneuverability.

Re claim 12, the power sources 18 and yaw control surfaces (as taught by Burnelli and used to modified Rutan's aircraft) on Rutan's aircraft are as forward as the larger lifting surface since they are on the larger lifting surface.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutan 4641800 as modified by Rutan ATTT as applied to claim 1 above, and further in view of admitted prior art that successful testing of a canard aircraft with a single tractor engine that was witnessed.

Rutan 4641800 as modified by Rutan ATTT discloses all claimed parts except for the tractor engine. However, the admitted prior art that tractor engines are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used a tractor engine in Rutan 4641800's system as modified by Rutan ATTT and as taught by the admitted prior art to have the predictable result of more efficient thrust production.

**(10) Response to Argument**

In response to applicant's arguments concerning the 35 USC 112 rejection, the examiner maintains that claims 1 and 11 are misleading and vague. As the examiner has stated in the rejection, a canard is "one of two small lifting surfaces in front of the main lift wings". The canard can not include the main lifting surface or the main wing. However, the applicant seems to have claimed that the canard must include the main lifting surfaces as well as the smaller lifting surfaces. Plus, as it is currently claimed, it is not understood if the applicant is merely claiming the smaller lifting surfaces only or the smaller lifting surfaces along with main wing.

In addition, could it be that applicant is claiming that the canards are only two surfaces that are at the front of the aircraft? See the figure 1 below. Or is applicant claiming that the canard as being in the accepted view that a canard is show in figure 2 below.



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Figure 1.

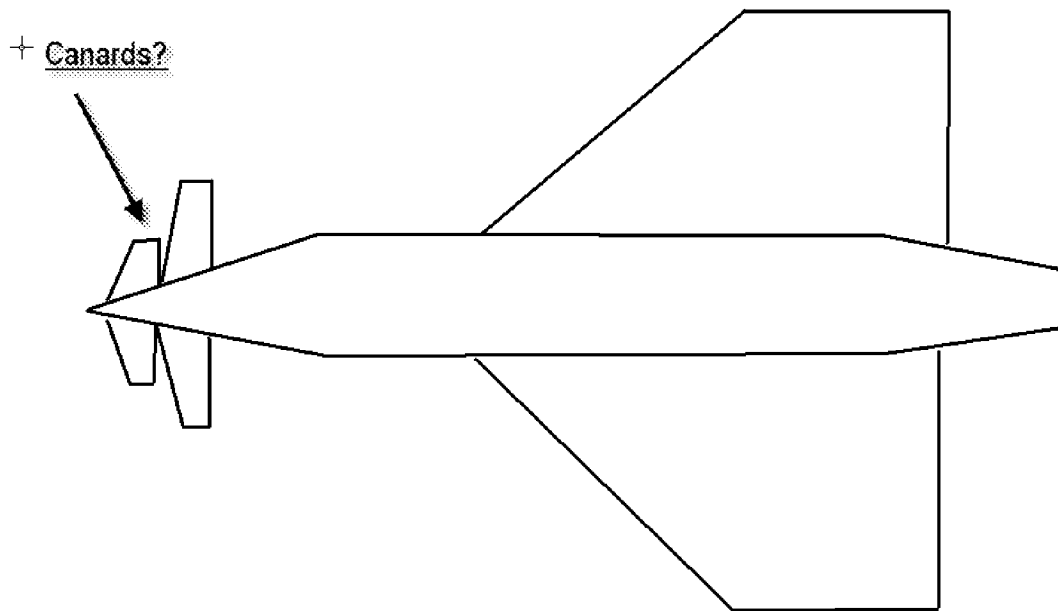
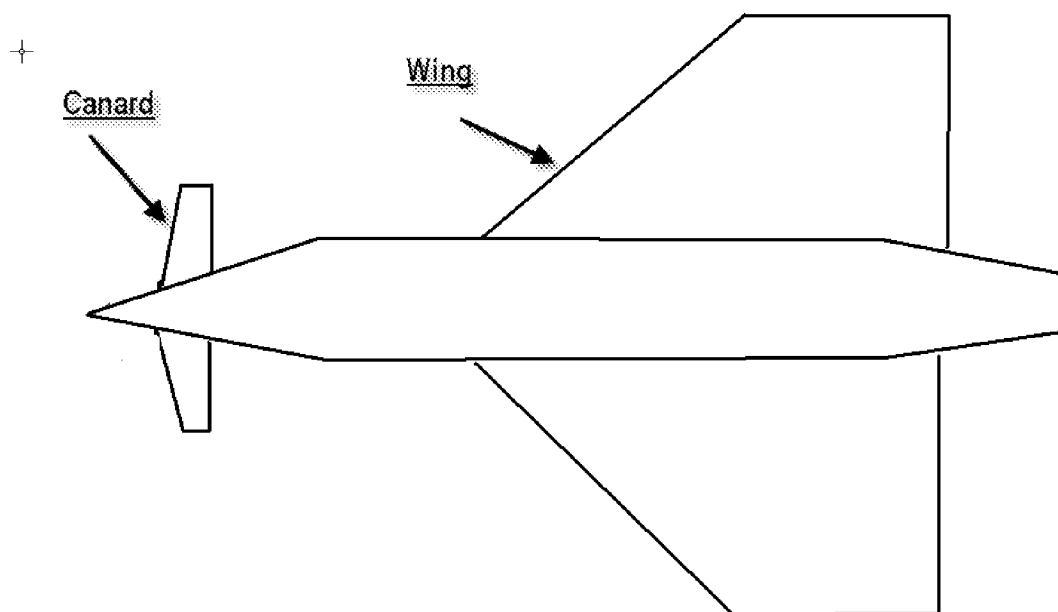


Figure 2.



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The language of the claims lead to such confusion.

Concerning the rejections of the claims with Rutan '800 in view of Rutan ATTT, attention is pointed to the BPAI decision on 12/12/2007. Page 11 of the decision remanded the appeal to the examiner to make the rejection of Rutan '800 in view of Rutan ATTT. The rejection has been made with these references.

Applicant has argued on pages 5-6 that the examiner erred in refusing patentable weight to size and scale limitations in claims 1, 6, and 11. As stated by the examiner, motorcycles, a patient on a gurney, and a man in a wheelchair varies greatly. A motorcycle can be as small as less than 1 foot tall to big motorcycles such as monster road cruisers. A patient or a man, too, can vary vastly in sizes. People can range from being the world shortest man to the world tallest. The examiner must read the claims with the broadest and reasonable interpretation of the claims. Applicant's very narrow interpretation of what "large" is does not overcome the rejections. Applicant further argued that 5 feet by 4 feet openings (as claimed in claim 6) must be considered as "large", since "large objects" can pass through the openings. If this line of logic is to be considered, objects such a man in wheel chair, a patient in a gurney, and a motorcycle that are larger than 5 feet by 4 feet would not considered to be "large objects"? Plus, if a tiny motorcycle (like that of a small kid's motorcycle) that is less than 5 feet by 4 feet, then this can be considered to be a "large object"?

As for the argument concerning the "aircraft design not a predictable art", just because designing an aircraft is "hard", this does not mean that a person skilled in the art would have not found it obvious to have modified Rutan '800 in view of Rutan ATTT. Putting a door at the rear

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of Rutan '800 in view of Rutan ATTT would not be considered to be "hard" but obvious since this allows easier loading of cargos inside of Rutan' 800 aircraft. Wallis is not a prior art that was used the rejection and his opinion does not render Rutan '800 in view of Rutan ATTT as unobvious.

In part 3 on page 8, applicant has argued that the since the design patent D292393 is by Rutan, that this design patent would identical to that of Rutan '800. This is not convincing since the D292393 relates to a different aircraft than that of Rutan '800. To equate the aircraft of D292393 as being identical to that of Rutan '800 is incorrect. The aircraft of Rutan '800 is not the same or identical to that of D292393. Rutan '800 aircraft clearly shows the fin 26 being amidship, which is at the center of the aircraft. This fin 26 is not at the rear.

Applicant also argued that since Rutan shows a pair of pusher engines, this would mean that a modified door at the rear would be inoperable. This argument is nor persuasive since the alleged presumption is not specifically supported by any evidence. As the examiner has stated previously, a wheelchair, motorcycle, or a patient on a gurney comes in many sizes. A person skilled in the art would have used a door at the rear of Rutan '800 as taught by Rutan ATTT to easily load and unload cargo such as a wheelchair, motorcycle, etc. The placement of the door at the rear does not mean that the rear pusher engines would be moved or interfere with the door. Applicant's insistence that a door would interfere with the engine is unfounded and has not provided any proof that a door at the end of the aircraft would destroy the reference.

As for the argument on page 9 about the vertical stabilizer being at the rear of the fuselage and thus being an empennage, the examiner disagrees. As stated by the examiner in the final rejection (7/13/09), Rutan mentioned that empennage is eliminated. See the first paragraph

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of "Detailed Description" in column 4, line 26-68. Amidship is commonly defined as "located in the middle part of a ship or aircraft." Taken these two facts together, it is quite clear that Rutan '800 does not teach an empennage. Applicant's very narrow interpretation of "amidship" to that of a secondary meaning is not convincing in overcoming the fact that "amidship" is defined as "in or toward the middle part of a ship or aircraft; midway between the ends".

As for the argument on page 11, part (2), to have changed the size of the aircraft to have a weight limit of 5000 lbs and hp limit of 500 is well within the level of a person of ordinary skill. Plus, putting a door at the rear of Rutan '800 in view of Rutan ATTT to accommodate wheelchairs, motorcycle, etc. would be obvious. The sizes of wheelchairs, motorcycles, etc. come in vast range of sizes. Hence, a door at the rear of Rutan '800 as modified by Rutan ATTT teaches what has been claimed.

As for page 12, part (3), placing a door at the rear would not be radically redesigning the aircraft of Rutan '800. Applicant's insistence that putting a door at the rear would require the engines to be moved is an invalidated opinion and is not based upon solid data.

As for page 13, part C, Rutan ATTT was used to show that doors at the end of a fuselage is well known. Rutan ATTT is not relied upon to teach a boom supported empennage.

Please note that Weiland, Hawley, and Weaver, is not pertinent to the current appeal since these references were not used in the rejection of the current claims.

#### **(11) Related Proceeding(s) Appendix**

Copies of the court or Board decision(s) identified in the Related Appeals and Interferences section of this examiner's answer are provided herein.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Tien Dinh/

Primary Examiner, Art Unit 3644

Conferees:

Khoi Tran /KT/

/Michael R Mansen/

Supervisory Patent Examiner, Art Unit 3644